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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,490	10/02/2000	Masaru Hoshino	Q61047	4937

7590 10/20/2003

Sughrue Mion Zinn MacPeak & Seas
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER

EDWARDS, PATRICK L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 10/20/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,490

Applicant(s)

HOSHINO, MASARU

Examiner

Patrick L Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 and 11 rejected under 35 U.S.C. 102(b) as being anticipated by MacDonald (EP 0 443 851 A1).

With regards to claim 1, MacDonald discloses a storage device which stores input image data in a first area (page 3 line 4 in conjunction with Figure 1). The store (element 1 of Figure 1) disclosed in MacDonald is analogous to a first area of a storage device as stated in the claim.

MacDonald also discloses a refuting device which stores, in a second area of the storage device, sample image data produced from the input image data that has been stored in the first area (page 3 lines 4-9 in conjunction with Figure 1). The frame store (element 3, Figure 1) of MacDonald stores a second colour space (analogous to sample image data) which is indeed produced from the original image. The frame store as disclosed in MacDonald is analogous to a second area of a storage device as stated in the claim. As a result, element 2 of Figure 1, which clearly stores in a second area, sample image data produced from input image data in a first area, is analogous to a refuting device as recited in the claim.

MacDonald also discloses a pseudo display device which outputs, to a display, pseudo image data obtained by performing a number of different processes for filtering the sample image data stored in the second area (page 2 lines 10-11). The terms “modifying” (page 2 line 21) and “retouching” (page 2 line 14) as disclosed in MacDonald are analogous to filtering as stated in the application. In addition, the monitor from MacDonald is analogous to a display as stated in the claim. As a result, the combination of elements 4 and 5 from Figure 1 is analogous to a pseudo display device as recited in the claim because

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said combination outputs to a display (element 6, Figure 1), image data obtained by performing processes on sample image data stored in a second area (element 3, Figure 1).

MacDonald additionally discloses a parameter registration device which stores, in a third area of the storage device, parameters that are to be referred to for each kind of process that is performed for filtering the sample image data in the second area (page 3 lines 13-20 in conjunction with Figure 1). The LUT 4 (element 4 in Figure 1) disclosed in MacDonald is analogous to a third area of a storage device as recited in the claim. The contents of said LUT are analogous to parameters as stated in the claim.

MacDonald additionally discloses a filtering device which, while referring to the parameters in the third area, performs, in a predetermined order, a number of different processes (i.e. controls lightness, color and hue as stated in page 3 lines 6-7) for filtering the input image data in the first area to obtain image data for output (page 2 lines 11-13 and page 3 lines 28-33 in conjunction with Figure 1). The processor (element 7 of Figure 1) disclosed in MacDonald is analogous to a filtering device as stated in the claim. Said processor refers to the contents of LUT 4 while performing the processes to generate a final representation of the image in the first colour space. The image in the first colour space as disclosed in MacDonald is analogous to input image data as stated in the claim.

With regards to claim 6, all of the steps from claim 1 are included and an image processing method is additionally disclosed. MacDonald discloses an image processing method (page 1 line 1).

With regards to claim 11, all of the steps from claim 1 are included and a computer readable medium containing a processing program for permitting said steps to be performed by a computer is additionally disclosed. MacDonald discloses a programmed computer for implementing said steps (page 2 line 54). The idea of storing a computer program on a computer readable medium is inherent to the idea of programming a computer.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 7-10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald in view of Fisher (US Patent 4,833,625). The arguments as to the relevance of MacDonald in paragraph 2 above are incorporated herein.

With regard to claim 2, which is representative of claims 7 and 12, MacDonald fails to disclose that said filtering device sequentially performs, in accordance with an order established to minimize color information and spatial information reductions, a number of different processes for filtering the input image data. Fisher discloses a pipelined architecture that sequentially performs a sequence of functions (column 16 lines 4-5). The sequence of functions as disclosed in Fisher are analogous to a number of different processes for filtering as stated in the application. Fisher also discloses that the sequence of functions is performed in an order to help minimize image information loss (column 16 lines 33-41). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging apparatus and method of MacDonald to include the sequential filtering of an image as taught by Fisher. Such a modification would have allowed for a filtering device that avoided information reductions in the output image and consequently avoided visible contouring in the output image (Fisher column 16 lines 33-41).

With regard to claim 3, which is representative of claims 8 and 13, it is additionally disclosed that said filtering device performs its operations in the following specified order.

- Tone curve correction process for an RGB model
- Saturation correction process for an HSB model
- A spatial filtering correction process

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A tone curve correction process is a way of adjusting the color of an image. A saturation correction process is used to adjust the brightness of an image. Spatial filtering is a commonly used term in the art and refers to any number of a wide array of image processing operations that include smoothing, anti-aliasing, etc. It would have been an obvious matter of design choice to modify the combination of MacDonald and Fisher to include a specific named order of steps in order to accomplish image filtering. Besides the advantage of image information reduction mentioned in claim 3 and argued in the above combination of MacDonald and Fisher, the applicant has not disclosed that having the filtering steps sequentially ordered as such solves any problem or is for any particular purpose.

With regard to claim 4, which is representative of claims 9 and 14, the applicant further discloses that said pseudo display device performs image processing on the data in the second area in the same order that it is performed on the input image data in the first area. MacDonald discloses a means for modifying the input image data in a first area (analogous to the first colour space) by using the modification applied to a sample image data in a second area (analogous to an image in the second colour space). This is clearly explained in page 2 of MacDonald on lines 11-13.

With regard to claim 5, which is representative of claims 10 and 15, the applicant further discloses that said refuting device generates sample image data by reducing the size of the input image data stored in the first area. It is clearly disclosed in MacDonald (page 2 lines 9-10) that the sample image data (or second colour space) has a reduced resolution with respect to the original input data (first colour space).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (703) 305-6301. The examiner can normally be reached on 8:30am - 5:00pm M-F.

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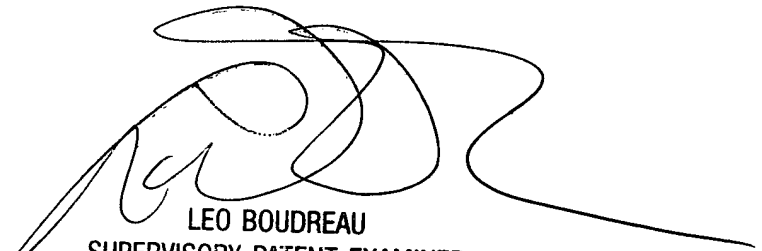
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Patrick Lynn Edwards

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A handwritten signature in black ink, appearing to read "P. Lynn Edwards".A large, stylized handwritten signature in black ink, likely belonging to Leo Boudreau.

LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600